

**ABSTRACT OF THE DISCLOSURE**

A motor vehicle kinetic energy recovery system uses one or more cylinders of an internal combustion engine as the first or primary stage in a multi-stage high pressure air compression system, a compressed air storage system, compressed air operated drive train boosters and vehicle management electronics to provide cooperation between the air compression, storage and booster systems. The multi-stage, high pressure air compressor system is operable through engine compression braking allowing kinetic energy of a vehicle to be recaptured during retardation of vehicle speed.